

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-36 (Cancelled)

37. (New) A process for producing a modified electrolyte comprising:
contacting a solid polymer electrolyte or a precursor thereof with an amine compound; and

heating the resulting amine-contacted solid polymer electrolyte or precursor thereof.

38. (New) The process for producing the modified electrolyte according to claim 37, wherein said heating step is conducted at a temperature of from 40 to 200°C.

39. (New) The process for producing the modified electrolyte according to claim 37, wherein the solid polymer electrolyte is a perfluoro polymeric electrolyte.

40. (New) The process for producing the modified electrolyte according to claim 37, wherein the amine compound has a diffusion rate in the solid polymer electrolyte or the precursor thereof which is higher than the reaction rate with the solid polymer electrolyte or the precursor thereof.

41. (New) The process for producing the modified electrolyte according to claim 37, wherein the amine compound is at least one compound selected from the group consisting of ammonia, alkali metal bis(trimethylsilyl)amide, sodium amide, 1-hexylamine, ethylamine, propylamine, butylamine, pentylamine, heptylamine, nonylamine, decylamine, perfluoromethylamine, perfluoroethylamine, perfluorobutylamine, perfluoropentylamine and perfluoroheptylamine.

42. (New) A modified electrolyte obtained using the process according to claim 37.

43. (New) An electrochemical device using the modified electrolyte according to claim 42.

44. (New) A solid polymer electrolyte fuel cell using the modified electrolyte according to claim 42.

45. (New) A process for producing a modified electrolyte comprising:
contacting a solid polymer electrolyte or a precursor thereof with an amine compound; and

contacting the resulting amine contacted solid polymer electrolyte or precursor thereof, with a base.

46. (New) The process for producing the modified electrolyte according to claim 45, wherein the base is at least one compound selected from the group consisting of:

trimethylamine, triethylamine, pyridine, DBU (1,8-diazabicyclo[5.4.0]-7-undecane) and DBN (1,5-diazabicyclo[4.3.0]non-5-ene);

sodium hydroxide, lithium hydroxide, calcium hydroxide, aluminum hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, sodium hydrogencarbonate and sodium alkoxide;

sodium hydride, potassium hydride, calcium hydride, lithium aluminum hydride, sodium borohydride; and

butyl lithium, sodium cyclopentadienide and phenyl lithium.

47. (New) The process for producing the modified electrolyte according to claim 45, wherein the solid polymer electrolyte is a perfluoro polymeric electrolyte.

48. (New) The process for producing the modified electrolyte according to claim 45, wherein the amine compound has a diffusion rate in the solid polymer electrolyte or the precursor thereof which is higher than the reaction rate with the solid polymer electrolyte or the precursor thereof.

49. (New) The process for producing the modified electrolyte according to claim 45, wherein the amine compound is at least one compound selected from the group consisting of ammonia, alkali metal bis(trimethylsilyl)amide, sodium amide, 1-hexylamine, ethylamine, propylamine, butylamine, pentylamine, heptylamine, nonylamine, decylamine, perfluoromethylamine, perfluoroethylamine, perfluorobutylamine, perfluoropentylamine and perfluoroheptylamine.

50. (New) A modified electrolyte obtained using the process according to claim 45.

51. (New) An electrochemical device using the modified electrolyte according to claim 50.

52. (New) A solid polymer electrolyte fuel cell using the modified electrolyte according to claim 50.

53. (New) A process for producing a modified electrolyte comprising:

contacting a solid polymer electrolyte or a precursor thereof with an amine compound;

heating the amine-contacted solid polymer electrolyte or precursor thereof; and

contacting the amine-contacted solid polymer electrolyte or precursor thereof, with a base.

54. (New) The process for producing the modified electrolyte according to claim 53, wherein said heating step is conducted at a temperature of from 40 to 200°C.

55. (New) The process for producing the modified electrolyte according to claim 53, wherein the solid polymer electrolyte is a perfluoro polymeric electrolyte.

56. (New) The process for producing the modified electrolyte according to claim 53, wherein the amine compound has a diffusion rate in the solid polymer electrolyte or the precursor thereof which is higher than the reaction rate with the solid polymer electrolyte or the precursor thereof.

57. (New) The process for producing the modified electrolyte according to claim 53, wherein the amine compound is at least one compound selected from the group consisting of ammonia, alkali metal bis(trimethylsilyl)amide, sodium amide, 1-hexylamine, ethylamine, propylamine, butylamine, pentylamine, heptylamine, nonylamine, decylamine, perfluoromethylamine, perfluoroethylamine, perfluorobutylamine, perfluoropentylamine and perfluorohexylamine.

58. (New) The process for producing the modified electrolyte according to claim 53, wherein the base is at least one compound selected from the group consisting of:

trimethylamine, triethylamine, pyridine, DBU (1,8-diazabicyclo[5.4.0]-7-undecane) and DBN (1,5-diazabicyclo[4.3.0]non-5-ene);

sodium hydroxide, lithium hydroxide, calcium hydroxide, aluminum hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, sodium hydrogencarbonate and sodium alkoxide;

sodium hydride, potassium hydride, calcium hydride, lithium aluminum hydride, sodium borohydride; and

butyl lithium, sodium cyclopentadienide and phenyl lithium.

59. (New) The process for producing the modified electrolyte according to claim 53, wherein said heating step is performed before said step of contacting with a base.

60. (New) The process for producing the modified electrolyte according to claim 53, wherein said step of contacting with a base is performed before said heating step.

61. (New) A modified electrolyte obtained using the process according to claim 53.

62. (New) An electrochemical device using the modified electrolyte according to claim 61.

63. (New) A solid polymer electrolyte fuel cell using the modified electrolyte according to claim 61.